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ABSTRACT

As part of the overall study of the development of behavioral objectives for preschool children, the three parts of this report discusses matching procedures, survey instruments, and sampling guidelines. Part C, Matching Objectives and Recommendations for Development of Measures, contains discussions of the following: A Matching of Existing Measures to Behavioral Objectives (Using the Matched List, and Matches); Recommendations for Further Development of Measures for Determining Terminal Developmental Characteristics, and Appendixes: A. Abstract Sheet, B. Coding Guides, C. Directory of Publishers, and D. Supplementary Bibliography. Part D, Titles I and III Program-Evaluation Survey Instruments: Scope and Design, discusses the following topics: A Data Gathering Instrument (Survey of Program in Early Childhood, SPEC), Integrating the SPEC into Programs, Strengths and Limitations of SPEC, Survey Requirements at Other Levels, and Survey of Program in Early Childhood: for Title I or III Evaluation. Part E, Sampling Recommendations or Guidelines, is a systematic presentation of guidelines for the sampling of cases, which is illustrated with a Figure titled "Sampling of Cases by Phases of the National Normative and Evaluation Studies." (For related documents, see PS 005 444-447.) (CK)

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LITERATURE SEARCH AND DEVELOPMENT OF AN EVALUATION SYSTEM IN EARLY CHILDHOOD EDUCATION

III. PART C--MATCHING OBJECTIVES AND RECOMMENDATIONS FOR DEVELOPMENT OF MEASURES
PART D--TITLES I AND III PROGRAM-EVALUATION SURVEY INSTRUMENTS: SCOPE AND DESIGN
PART E--SAMPLING RECOMMENDATIONS OR GUIDELINES

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ERRATA FOR REPORT III PART B[1]

page, location

182, 1st line of APELL--should read "Three thousand experimental Ss were used..."

206, "Behavior Check List" entry--Long should be (Lang, 1966).

216, "Minnesota Percepto-Diagnostic Scale"--is the correct spelling.

Several pages--Science Research Association should read Science Research Associates, as is correct in Appendix C.

[1]Only those errata are listed which affect the sense of Part B or its usage.

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PART C--

MATCHING OBJECTIVES

AND

RECOMMENDATIONS FOR DEVELOPMENT OF MEASURES

INTRODUCTION

Part C of the present report completes the section of the report begun in Parts A and B, adding to it an extra-contractual inclusion. The "Recommendations" portion constitutes the entirety of contractual Part C. All contractual features of Part B appeared in Report III(A-B). Appendices in the present report are, in any event, essential to the use of Report III B as well as C. Thus, the "Matching" section of the present report is not a contractual part of the overall project. It does, however, in our opinion add significantly to the overall report's usability in the field and ought for this reason be made available to users of the evaluation portions of the project's reports.

A MATCHING OF EXISTING MEASURES TO BEHAVIORAL OBJECTIVES

This portion of the final report is a continuation of Report III. More extensive remarks will be offered in the "Recommendations" section about the conditions under which the matches made in this section could become more defensible. Short of implementing those recommendations, many of the matches must be considered highly tentative, because the existing instruments may be appropriate to only a limited number of the demographic subgroupings of five year olds, with their validity unknown for other subgroups. Criterion referenced tests and special testing considerations are also discussed under "Recommendations".

The general format of this section is structured according to the coded listings of Appendix B, which were previously (see Report III) used to indicate, for the tests reviewed, their applicability to particular behavioral characteristics. The current section is more extensive and definitive than were those briefer mentions of matching and effectively supercedes them. The only departures from the sequence of Appendix B will occur for those variables which were expanded or regrouped in Part A of Report III (see especially pages 136-138 for a summary list of expansions and regroupings). Appendix B will, however, override the above summary list in the case of category deletions which occurred during the preparation of specific objectives. Even though specific objectives were not, in those cases, justified from the research literature, acceptable measurement techniques may exist for examining the status of children. These are designated "No objective" to clarify their status from Report III.

To summarize these statements, Appendix B is the basis of this section's sequential format except for variables which were expanded or regrouped, as summarized in Report III, pages 136-138. Finally, subscripts are added to the Appendix B codes for the categories expanded in Part A of Report III. For example, for P-3 "Growth and Maturation" the first expanded subcategory, "Physical Measures" is coded P-3-1.

Using the Matched List

The convention used will be to identify the characteristic by its coded designation, where P = Psychomotor, C = Cognitive, A = Affective. This is followed by the associated number from Appendix B. In the case of regroupings, all interrelated coded designations appear together. Immediately following this designation of the child characteristic, reference is made to assessment procedures from Part B of Report III. Cross reference to Part B is made to the list titles by the abbreviations: T = "Test", ObP = "Observational Procedures", and TP = "Technical Procedures". Further brief commentary may appear to indicate the range and limitations of the recommended assessment procedure(s). When multiple measures are mentioned, any comments are interspersed in such a manner as to retain clearly the connection between comment and procedure. Given this sequential format, the user can quickly locate assessment procedures for the characteristic(s) of concern to him. Thus, we have traded off the elegance of narration for the utility of a list that guarantees rapid retrieval. The user who desires further information on a selected assessment procedure can then search the alphabetized T, ObP or TP list for

that entry. Beside the entry he will find reference made to a supplier or basic source document (Appendices C and D).

The recommended assessment procedures will generally be slightly broader than the stated objectives, although the user can be assured regarding their general compatibility. What should be done to sharpen these matches appears within the "Recommendations" chapter. Often available data permit no clear preferential discriminations between available devices. In these cases, multiple entries are provided. Since potential demographic subpopulations cannot be anticipated, in fact, for a document such as this which will be broadly distributed, it has almost always seemed a propos to provide the multiple entries, leaving the final selection to the user who can consider the requirements imposed by his own child sample.

Matches

P-0: Blum-Fieldsteel Developmental Charts (T) used in conjunction with Gesell Developmental Schedules (T) for selected parts of each; Accident Proneness (ObP); Motor Behavior (ObP); Motor Behaviors (TP); Rail-Walking Test (T); Gross Motor Tasks (T); Denver Developmental Screening Test (T) for parts; Vineland Social Maturity Scale (T) for parts.

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P-1 (No objective): See P-4.

P-2 (No objective): A-B-C Vision Test for Ocular Dominance (T); Left-Right Discrimination Test (T).

P-3-1: Anthropometrics and Somatotype (TP); Wetzel Grid Charts (T); Width-Weight (T); Merrill-Palmer Logarithmic Developmental Graph (T).

P-3-2: Nutritional Status and Diet (TP).

P-3-3: Dental (TP); Medical (TP); Neurological Evaluation (TP); Infant and Maternal History (T).

P-4-1: Goodenough-Harris Drawing Test (T); Drawings (TP); Children's Paintings (TP); Draw-a-Person (T); Riley Preschool Developmental Screening Inventory (T) for subtest; First Grade Screening Test (T) for subtest; Measuring Scale for Freehand Drawing (T); Slosson Drawing Coordination Test (T).

P-4-2: Graham, Berman, and Ernhart, 1960; Copy Forms Test (T); Bender Gestalt Test for Young Children (T); Visual Motor Gestalt Test (T); First Grade Screening Test (T) for subtest; Riley Preschool Developmental Screening Inventory (T) for subtest; Lurcat Test of Graphical Abilities (T).

P-4-3: Optic Evaluation (TP); Psychomotor (TP); AO H-R-R Pseudo Isochromatic Plates (T); AO School Vision Screening Test (T); Arthur Adaptation of Leiter (T); Auditory Discrimination Test: Wepman (T); Children's Auditory Discrimination Inventory (T); Cohn Visual Acuity Chart (T); Denver Developmental Screening Test (T); Dvorine Pseudo-Isochromatic Plates (T); Eames Eye Test (T); Freeman Acuity Tester (T); Frostig Developmental Test of Visual Perception (T) subtests; Gesell Developmental Schedules (T); Halstead Battery of Neuropsychological Tests (T); Illuminant-Stable Color Vision Test (T); Katz Auditory Screening Test (T); Lincoln-Oseretsky Motor Development Scale (T); Mark-Car Accuracy Test (T); Massachusetts Vision Test (T); Merrill-Palmer Scale of Mental Tests (T); Moore Eye-Hand Coordination Test (T); Motor Steadiness Battery for Children (T); Oseretsky Tests of Motor Proficiency (T); Pre-Tests of Vision, Hearing, and Motor Coordination (T); Ryckman-Bereiter-Powell Auditory Closure Test (T); Spiral After Effect Test (T); Stycar Hearing Tests (T); Templin Speech Sound Discrimination Test (T); Three-Dimensional Auditory Discrimination Test (T); Valett Developmental Survey of Basic Learning Abilities (T) subtests; Goldman-Fristoe-Woodcock Test of Auditory Discrimination (T).

P-5 (No objective): Play (ObP); Cf. P-0.

P-6 (No objective): Vineland Social Maturity Scale (T); Preschool Attainment Research (T); Freud, 1965--S; subparts of Gesell Developmental Schedules (T) and Blum-Fieldsteel Developmental Charts (T); subpart of Cain-Levine Social Competency Scale (T).

P-7-1: Speech (TP); Arizona Articulation Proficiency Scale (T); Fisher-Cogemann Test of Articulation Competency (T); Goldman-Fristoe Test of Articulation (T); Hejna Developmental Articulation Test (T); Integrated Articulation Test (T); Irwin Articulation Test (T); Laradon Articulation Scale (T); Preschool Language Scale (T) subtest; Speech Articulation Test for Young Children (T).

P-7-2: Bricker, 1967; Echoic Response Inventory for Children (T); Massad Mimicry Test (T); Parallel Sentence Production Test (T).

P-8 (No objective): No good measures located.

C-0-Arithmetic (No objective): (Use in connection with C-2-2) American School Achievement Tests: Arithmetic Readiness (T); Arithmetic Concepts Inventory for Kindergarten (T); Comprehensive Mathematics Inventory (T); Head Start Arithmetic Test (T); Preschool Kindergarten Modern Mathematics Test (T).

C-0-Reading: American School Reading Readiness Test; Binion-Beck Reading Readiness Test (T); Clymer-Barrett Prereading Battery (T); Gates Reading Readiness Test (T); Gates-MacGinitie Reading Readiness Skills Test (T); Harrison-Stroud Reading Readiness Profiles (T); Keystone Ready to Read Tests (T); Lee-Clark Reading Readiness Test (T); Lippincott Reading Readiness Test (T); McHugh-McParland Reading Readiness Test (T); Murphy-Durrell Reading Readiness Analysis (T); Prereading Inventory of Skills Basic to Beginning Reading (T); Prereading Test (T); Reading Aptitude Tests (T); Reading Readiness (T); Spache Binocular Reading Test (T); Steinbach Test of Reading Readiness (T); Watson Reading Readiness Test (T); Diagnostic Reading Tests (T).

C-0-Readiness, General (No objective): Individual Diagnostic Tests--Minnesota Preschool Scale (T); Prekindergarten Goal Card (T); Valett Developmental Survey of Basic Learning Abilities (T). Readiness for Paper and Pencil Tests--Vision, Hearing and Motor Coordination (T). Parent Administered Readiness--Early Detection Inventory (T); Parent Readiness Evaluation of Preschoolers (T); School Readiness Survey (T). General and Group Tests--Assessment Program of Early Learning Levels (T); Evaluation Scale for Four- and Five-Year-Old Children (T); Evanston Early Indentification Scale (T); First Grade Screening Test (T); Kindergarten Evaluation of Learning Potential (T); Kindergarten Tests (T) and Predictive Index Tests (T); Maturity Level for School Entrance and Reading Readiness (T); Metropolitan Readiness Test (T); Nebraska Test of Learning Aptitude (T); Peabody Individual Achievement Test (T); Preschool Attainment Record (T); Preschool Inventory: Cooperative (T); School Readiness Checklist (T); School Readiness: Behavior Tests Used at the Gesell Institute (T); Sprigle School Readiness Screening Test (T); Stanford Early School Achievement Test (T); Vane Kindergarten Test (T); Wide Range Achievement Test (T).

C-1: Attending Behavior (ObP); Test of Auditory Discrimination (T), differential between silent and masked portions should provide index of listening attention; CASES (T); Cincinnati Autonomy Test Battery (T) subparts; Attention Span Test (T); Intensity of Task Involvement Scale (T); Maze-Trail Test (T).

C-2-1: Conceptual Behavior (TP); Classification Skills (TP); Concept Test for Children (T); Generic Identity Scale (T); Block Sort Test (T); Inductive Concept Identification Test (T); Test of Concept Utilization (T); Toy Sorting Task (T); See also C-9-2.

C-2-2: Conceptual Behavior (TP); See C-0-Arithmetic for related tests; See also C-9-2.

C-2-3: Conceptual Behavior (TP); Time (TP); Time Concept Test (T); See also C-9-2.

C-2-4: Conceptual Behavior (TP); See also C-9-2.

C-2-5: Conceptual Behavior (TP); See also C-9-2.

C-2-6: Basic Concept Inventory (T); Boehm Test of Basic Concepts (T); Instructional Concepts Inventory (T); Peabody Individual Achievement Test (T); Stanford Early School Achievement Test (T); Tests of Basic Experience (T); Tests of General Ability (T) subtest; Wide Range Achievement Test (T).

C-3: See A-35.

C-4 (No objective): Individual Tests--Arthur Point Scale of Performance Tests (T); Columbia Mental Maturity Test (T); Merrill-Palmer Scale of Mental Tests (T); Minnesota Preschool Scale (T); Pictorial Test of Intelligence (T); Slosson Intelligence Test (T); Stanford-Binet (T); Wechsler Intelligence Scale for Children (T); Wechsler Preschool and Primary Scale of Intelligence (T). Group Intelligence and Aptitude--American School Intelligence Test (T); California Short-form Test of Mental Maturity (T); Cattell (T); Davis-Eells Games (T); Detroit Kindergarten Test (T); Detroit Test of Learning Aptitude (T); IPAT Culture Fair Intelligence Test (T); Kuhlmann-Anderson (T); Lorge-Thorndike Intelligence Test (T); Mental Abilities (T); Otis Group Intelligence Scale (T); Otis-Lennon Mental Ability Test (T); Pintner-Cunningham Primary Test (T); Pre-Primary Mental Ability (T); Scholastic Mental Ability Tests (T); Screening Test of Academic Readiness (T); Short Test of Educational Ability (T); SRA Tests of General Ability (T); Tests of General Ability: Inter-American (T). Multi-factor--SRA Primary Mental Abilities (T); See also C-9-1 for multi-factor.

C-5-1: Language (TP); Story Retelling Technique (TP); Incomplete Story Technique (TP); Tell as Story Technique (TP); Test of Verbal Maturity (T); Pluralization Test (T); Early Childhood Language Tests (T).

C-5-2: Language (TP).

C-5-3: Vocabulary (TP); Expressive Vocabulary Inventory (T); Full Range Picture Vocabulary Test (T); Holborn Vocabulary Test for Young Children (T); Peabody Picture Vocabulary Test (T); Quick Test (T); Van Alstyne Picture Vocabulary Test (T).

C-5-General: Language (TP); Assessment of Children's Language Comprehension (T); Houston Test for Language Development (T); PLA (T); Preschool Language Scale (T); San Francisco Inventory of Communication Effectiveness (T); Tests of Basic Language Competencies (T); Vance Language Skills Test (T); Verbal Language Development Scale (T); ITPA--See C-6.

C-6: Illinois Test of Psycholinguistic Abilities (T); Kent-Rosanoff Free Association Test (T); Non-Verbal Representation Tasks (T); Word Association (TP); See also C-8-2 and P-4-3 for potentially related material.

C-7-1: Memory (TP); "Digit Span" subtest from Stanford-Binet (T) or Wechsler Intelligence Scale for Children (T); subtest of several tests in C-0-Readiness, General.

C-7-2: Memory (TP); See picture vocabulary tests in C-5-3 which are usable here; "Incidental and Intentional Learning" from Cincinnati Autonomy Test Battery (T).

C-8-1: Discrimination Learning (TP); Perceptual Processes (TP); Ayres Space Test (T); Children's Embedded Figures Test (T); Coloured Progressive Matrices (T); Figure-Ground Test (T); Figure Recognition Test (T); Frostig Developmental Test of Visual Perception (T); Haptic Perception Test (T); O'Connor Wiggly Block (T); Rod and Frame Test (T); TV Test Battery (T); Valett Developmental Survey of Basic Learning Abilities (T); Visual Discrimination Inventory (T).

C-8-2: Perceptual processes (TP); Psychomotor (TP); Assessment of Perceptual Development (T); Auditory Visual Pattern Test (T); Bender Visual-Motor Gestalt Test (T); Frostig Developmental Test of Visual Perception (T); Haptic-Visual Matching Test (T); Kindergarten Tests (T); Learning Methods Test (T); Primary Visual Motor Test (T); Reitan-Indiana Neuropsychological Battery (T); Screening Test for the Assignment of Remedial Treatments (T); TV Test Battery (T); Valett Developmental Survey of Basic Learning Abilities (T).

C-8-Styles: Children's Embedded Figures Test (T); Conceptual Styles Sorting Task (T); Design Recognition Test (T); "Early Childhood Embedded Figures Test" in Cincinnati Autonomy Test Battery (T); Haptic-Visual Matching Test (T); Multiple Categorization Test (T); Object-Picture Categorization Test (T); Rod and Frame Test (T).

C-9-1: Structure of Intellect (TP); TV Testing (TP); Cognitive Aspects of Learning (TP); Cognition, General (ObP); Block-Design Test (T); Cognitive Abilities Test (T); Coloured Progressive Matrices (T); Foster Mazes (T); Johns Hopkins Perceptual Test (T); Let's Look at Children (T); Porteus Maze Tests (T). Some of these are good indicators of g as well as measures of differentiable components of intelligence.

C-9-2: Piagetian Concepts (TP); Cognition, Piaget (ObP); Concept Assessment Kit--Conservation (T); Conservation Pictures Test (T); See also C-2-1 through C-2-5.

A-1, A-2: Aggression (ObP); Ascendance (ObP); Dominance/Submission (ObP).

A-3, A-4 (No objective): Classroom Climate (TP); See related material in A-48 and A-49.

A-5: Imitation (ObP); See also P-7-2.

A-6, A-11: Sex-Typing (TP); Sex-Typing (ObP); Toy Preferences (TP); IT Scale for Children (T); Structured Doll Play Test (T); Toy Preference Test (T).

A-7, A-9, A-14, A-43: Controls (TP); Resistance to Temptation (TP); Following Instructions (ObP); Guilt Assessments (TP); Delayed Recall of Designs (T); Design Recognition Test (T); Draw a Line Test (T); Form Board (T); Haptic-Visual Matching Test (T); Motoric Inhibitions Test (T); Motor Steadiness Battery for Children (T) to detect impulsivity; "Reflectivity-impulsivity" from Cincinnati Autonomy Test Battery (T); Walk a Line Slowly Test (T). Carefully selected projective techniques may be appropriate here--see Projection, general (TP).

A-8, A-47: Dependency, Attachment (ObP).

A-9: See A-7.

A-10: Adult Role (TP); Q-Sort (TP); Autonomy (ObP); Detachment (ObP); Leadership (ObP); Maturity (ObP); Behavior Inventory: Head Start (T); Cincinnati Autonomy Test Battery (T); Maxfield-Bucholz Scale of Social Maturity (T).

A-11: See A-6.

A-12, A-13: Cooperation Device (TP); Empathy (TP); Social Interaction (TP); Extraversion/Introversion (ObP); Prosocial Behaviors (ObP).

A-14: See A-7.

A-15 (No objective): Cain-Levine Social Competency Scale (T); California Preschool Social Competency Scale (T); Inventory of Socialization of Bilingual Children (T); Kohn Social Competence Scale; Preschool Attainment Record (T); Vineland Social Maturity Scale (T).

A-16: Color Meaning Awareness Test (T); Racial Awareness Test; Estvan, 1959--S; Estvan, 1965; Story Retelling Technique (TP).

A-17: See A-36.

A-18 (No objective): Primary Academic Sentiment Scale (T); PROSE (TP); Weikart Educational Attitude Test (T).

A-19: Egocentrism and Private Speech (TP); Social Expectations Scale (TP); Cruise, 1966.

A-20 (No objective): A Book About Me (T); Perceptions of Adult Role (T); Social Ability (TP).

A-21: Person Preference (ObP): Sociometric Picture Display Device (TP); Picture Sociometric Technique (T); Play Situation Picture-Board Sociometric (T); Reputation Among Peers (T).

A-22, A-23: Emotional Communication (ObP); Emotion Recognition Task (T).

A-24 to A-26, A-29 to A-32, A-41: Dispenser Device (TP); Discrimination Learning (TP); Reinforcement Delay (TP); Delay of Gratification Task (T); Mischel Technique (T); Social Reinforcement (TP); Teacher Behavior (TP); Aspiration, Achievement Orientation (ObP); Gumpgookies (T); Children's Locus of Control-External (T).

A-27, part of A-31: Stimulus Variation (TP); Curiosity and Exploratory Behavior (ObP); Children's Reactive Curiosity Scale (T); Curiosity Box (T).

A-28: Thematic and Stylistic Preferences (TP); Group Test of Color/Form Preferential Behavior (T); Stroop-Like Color/Form Task (T); See also A-18, A-21, A-27.

A-29 to A-32: See A-24 to A-26.

A-33 to A-34, A-39 to A-40, A-42, A-45: Emotional Reactions (TP); Emotionality (ObP); subtestsof Bristol Social-Adjustment Guides (T); Rating Form for Fear (T); Sarason-Type Anxiety Rating Scale (T); Temperament (ObP);

Adaptive Behavior to Demands (ObP); Inventory of Factors Affecting Test Performance (T).

A-35, C-3: Creativity (ObP); Divergent Thinking (TP); Structured Play (TP); Children's Individual Test of Creativity (T); Cincinnati Autonomy Test Battery (T), parts; Gross Geometric Forms (T); Minnesota Tests of Creative Thinking (T); Mother Goose Problems Test (T); Originality Test (T); Torrance Tests of Creative Thinking (T); Ward Creativity Tests (T).

A-36, A-17: Self Concept (TP); Self Concept (ObP); Brown IDS Self Concept Referents Test (T); Experimental Photographic Self-Concept Test (T); Illinois Test of Self-Derogation (T); Inferred Self-Concept Judgment Scale (T); Measurement of Self-Concept in Kindergarten Children (T); Preschool Self-Concept Pictures Test (T); Self Concept Rating Scale (T); Self Concept Silhouettes (T); Self Social Constructs Test (T); Thomas Self-Concept Values Test (T).

A-37: Cattell and Peterson, 1959; Damarin and Cattell, 1968; Schachter, Cooper, and Gordet, 1968; Personality, Global (ObP); Ego Development Stages (TP); California Test of Personality (T); Personality Evaluation Form (T); when available, Preschool Personality Questionnaire (T); Merrill-Palmer Personality Rating Scale (T). Carefully selected projectives may be appropriate here--see Projection, general (TP).

A-38: Psychiatric Evaluation (TP); Adjustment (ObP); Desirable/Undesirable Behaviors (ObP); Bristol Social-Adjustment Guides (T); Detroit Adjustment Inventory (T); Devereux Elementary School Problem Behavior Rating (T); Early-Adjustment-To-School Scale (T); Haggerty-Olson-Wickman Behavior Rating Schedules (T); Kohn Problem Checklist (T); Nursery School Adjustment Scale (T); Personal-Social Adjustment Rating Scales (T); Preschool Teachers Rating Scale (T); Process for In-School Screening (T); Symptom Checklist (T). Carefully selected projectives may fit here--see Projection, general (TP), but overt behavior has the highest known validity. This is especially true of overt interpersonal behavior.

A-39, A-40: See A-33.

A-41: See A-24.

A-42: See A-33.

A-43: See A-7.

A-44: Children's Stories (TP); Dramatic Play (TP); Doll Play (TP); Play (TP); Play Therapy (TP); Projection, general (TP); Projective Play (TP); Thematic and Stylistic Preferences (TP).

A-45: See A-33.

A-46 (No objective).

A-47: See A-8.

A-48 to A-49 (No objective): Children Rearing Practices (TP); Environmental and Ecological Analysis (TP); Family Characteristics (TP); Parental Teaching and Interacting (TP); Social Stratification (TP); Social Status Scale (T); Social Stratification Guidelines (T); Attitudes Toward Parental Control of Children (T); Education Attitude Survey (T); Family Adjustment Test (T); Family Relations Test (T); Maryland Parent Attitude Survey (T); Modified PARI for Mothers and Fathers (T); Mother-Child Relationship Evaluation (T); OEO Parent Activity Form (T); Parent Attitude Inquiry (T); Parent Attitude Research Instrument (T); Parental Role Questionnaire (T); Parent's Expectation Inventory (T); Permissiveness Scales (T); Racial Attitudes of Parents (T); Sex-Role Attitude Test, Parents (T); Teacher Irritability Scale (T); "This I Believe" Test (T); Winterbottom Scale (T).

RECOMMENDATIONS FOR FURTHER DEVELOPMENT OF MEASURES FOR DETERMINING TERMINAL DEVELOPMENTAL CHARACTERISTICS

In the foregoing section, some deliberate heaping up of assessment procedures has been accomplished in order to anticipate and support the following statement: no creation of new measures of terminal developmental characteristics at governmental expense is warranted except in a few areas that can be clearly pointed up by reference to the preceding section. This must be quickly qualified, however, with the statement: but much systematic effort is justified in the further validation and norming of existing measures. The present chaotic state of the measurement side of early childhood evaluation could be reduced to a new orderliness in the service of programs and the advancement of knowledge, if sufficient national investment were made in a plan like that outlined below. This section is deliberately focused upon product evaluation measures, in keeping with the contractual agreement. Similar forays could also be made into objectives formulation and the process of objectives implementation, but time denies extensive attention to them here.

First, however, some remarks will be directed against commonly prevailing test development assumptions and practices which seem to have contributed directly to the present state of affairs. For several generations the pattern of norming for tests, which were destined for broad public acceptance, has been to administer them to a stratified sample, constituted in representative proportions relative to some census figures or estimates. Short cut approximations have also been attempted, but without challenge to the underlying assumptions of representative norming. This practice presumably guarantees the quality of the test and

its appropriateness for administration to the entire universe represented by that sample. Within this framework, separate reporting of central tendency and dispersion, reliability and validity for subgroups of the norming sample has been almost unheard of. But it is difficult to imagine under what conditions any sizeable group of investigators or practitioners could or should be interested in the statistical artifacts produced by this approach to norming tests. Who is interested in the datum that IQ 100 is the mean of the population, when a sample of it has been constituted in this census-proportional manner? Some governmental agencies appear to desire this kind of diffuse, overall effectiveness answer, but to give it is to obscure more than one uncovers. Or, more germanely, what is the meaning of a deviation from this arbitrary population mean for a given child--since his relevant demographic comparison group is nowhere reported upon in the statistics of the test? It is strange indeed that supposed measures of individual differences have been developed in such disregard for the foundations of differential psychology. Children differ because they come from different demographic backgrounds. Their progress is best gauged relative to the conditions that obtain in their own cases. Thus, particularly when one moves into the area of evaluating the attainment of educational objectives, the needed yardstick of progress is not to be found in ever so many standardized tests however good their item validity. Their failure arises from persistent misconceptions of the purposes to which sampling theory can be turned and the legitimate limits of population description.

Rather than to rain further blows upon this unwieldly beast--the test normed on a sample representative of the total population--it is well to look at some byproducts of this approach to measurement development.

Numerous investigators, who have despaired of finding relevant measures of certain constructs for the particular demographic subgroups that they were studying, have spawned an ever widening array of poorly validated instruments about which only the spottiest of information is available. And, often to the credit of the investigators' daring, these few-time-used tests have indeed proved more suitable to the samples studied than have their revered, standardized competitors. The argument here is, nevertheless, not against normative tests; it is against those conditions which force evaluators and researchers into the position of having to develop their own tests to obtain subpopulation validity.

An obvious but unused alternative would be to norm a to-be-standardized test on all potential populations rather than on the artifactual overall population. How refreshing it would seem to turn at will in the manual of any cognitive or psychomotor or affective test to the section dealing with that particular population of children with which one is most nearly concerned. That subsets of an aggregate may behave quite differently under varying conditions is taken for granted in the physical sciences to the extent that separate tables are prepared for different solvents and different performance curves are charted for differing atmospheric conditions. Yet with something as complex as individual humans, the untenable tendency persists of lumping all together.

Take as a starting point for the required information breakdown some expanded form of those demographic subgroupings which have been used throughout this project, i.e., age, ethnicity, and socioeconomic status. To these one would surely wish to add sex, possibly an inner city-rural-suburban split, and such others as some expert panel of demographers, differential psychologists and sociologists, census analysts,

and experts in comparative education might agree upon as minimal. At this point one could identify those subsets of the total population to be represented in a norming procedure--except that they would not again be sampled proportionately but in such numbers as to provide stable estimates of each subpopulation's parameters for some given assessment device. Further, these data should be gathered on untreated or typically treated samples of the subpopulations. If reactivity to being treated is considered a fundamental problem in assessment--and it should be--then one would better arrange for the administration of a standardized "reactive treatment" to his samples throughout the period of their participation in norming. Results would be reported in the manual of each instrument according to some minimal subpopulations list, if the instrument were to be considered of acceptable comprehensiveness for use in educational outcomes assessment. Undoubtedly this would be a windfall to all investigators of child development as well. If the physical sciences recognize in excess of 100 elements, each having its own legitimate existence, should not the human sciences begin to consider alternatives to their single element approach to describing and measuring humans?

This kind of assessment norming should be conducted for at least one procedure or device in each of the areas in which educational objectives are presently justified for five-year-olds in Report III, Part A. Preliminary comparative study of multiple measures will often be required prior to the norming stage. Further, it should not be construed that a single measure will suffice for all demographic subgroupings. In some cases different instruments may be retained because they measure the same characteristic better in differing demographic subgroups. Informed

measurement has often used different devices for different applications to produce equivalent estimates.

If all of this were accomplished, the result would yet be somewhat unsatisfactory without attention to across-time trends (i.e., longitudinal samples) within subpopulations for a given measure. The frequency of these across-time samplings should be spaced so as to correspond, for educational purposes, to those curricular change intervals at which it will likely be necessary to assess the effects of short-term interventions. Four or six week intervals might seem desirable to fit whatever contingencies arise in operating programs. Longer term interventions may require for their assessment only the accumulation or trend of these shorter-interval periods. That is, the differential between two age points would serve as an index for longer-term educational outcomes. The purpose of establishing tables of across-time trends for subpopulations is to free the program evaluator of some of the usual, costly, and perhaps insurmountable burdens of his role.

How this is accomplished is apparent when one considers the implications of across-time, normative, subpopulation sampling in the standardization of a test. Having such available, a program evaluator could now determine the significance of a treatment without recourse to the often unavailable control group. He would in effect be making comparisons of his treated group to normative, subpopulation growth trends to which undifferentiated reactive treatment effects had been experimentally added at the time of standardization. That educational treatment would be considered successful which resulted in a significant upward departure from the pertinent growth trend, over the interval of the treatment.

Groups entering a treatment at a level above or below their subpopulation growth curve would be analyzed for significant upward departure from the trend, with reference to their own starting level. Original experimental control over reactive effects would rule them out as an alternate hypothesis to the program's contention that it was affecting children's development.

At this point the reader is perhaps impressed both with the advantages over present practices and with the potential high cost of establishing such test norms. Despite possible misgivings on the latter count, a cost analysis study would undoubtedly show a net cost benefit to public education in the long run from (1) the reduction of continuing fixed costs of control group selection and testing, (2) the improved quality of decision making made possible by more reliable evaluation, and (3) the diminished need to make agonizing decisions about who shall and shall not (i.e., as treatment and control groups) receive some promising educational commodity! The break-even point, from such an investment in better and more relevant norms, would surely come soon enough to provide the hoped for cost benefits--even in the event that it should prove necessary to renorm tests in this way about every five years. Clearly what is recommended is a vast infusion of governmental support into a chaotic but basically sound test development market. The infusion should, however, not be undifferentiated but precisely targeted for criterion accomplishments. General calls for new measures in this or that domain for five-year-olds is absolutely unwarranted, according to the aggregated evidence of the "Matches" section of this report.

It will, nevertheless, be insufficient to call for refinements and norming of existing tests without a coordinated empirical effort to establish

the subpopulation construct validity of those developmental measures which are selected for field testing. Such a federal effort could probably be coordinated to supply the missing across-domain correlational information which was pointed out in Reports I and II as a major knowledge gap. For the foregoing reasons, this norming must be carried out by test construction experts working collaboratively with child development experts and others. The level of technology in both of these disciplines appears high enough to warrant the confidence implied by the large scale effort recommended here. These disciplines unfortunately lack a history of closely collaborative effort. To offset this, it is recommended that any initial contracts be awarded to groups demonstrating their capacity to work collaboratively and productively across these disciplinary lines. Such initial validity studies should be conducted in close conjunction with ongoing early childhood programs which involve children from the diverse demographic backgrounds with which U.S.O.E. is ultimately concerned.

This plea for a symbiotic linkage between measurement research and ongoing programs echoes our remarks in Report I to this effect. A greater contemporary contribution by the child development-measurement team to the program's daily formative evaluation would complete such symbiotic ties by making this evaluative effort (1) contribute directly to instruction and by (2) informing the test developers more precisely of the characteristics of the children for whom they are developing summative devices. Continuing the present extrinsic and potentially exploitive relation of research to ongoing programs would, on the other hand, surely guarantee perpetuation of data gathering problems that is presently expensive and destructive of our best efforts to understand children

better. See in justification of this recommendation a sensitive exposition of ETS's efforts to work productively within the current, less-than-workable framework of relations between research and programs. (Educational Testing Service, 1969--S).

Even given all of the foregoing improvements, local adaptations of evaluation will still be warranted. Such adaptations ought only to be made according to recommended guidelines. Educational Testing Service currently offers a package of materials for preparing teachers and other school personnel to construct their own tests. They along with other major test publishers, some educational laboratories, and some private producers of instructional materials now offer extensive consultation services in support of local test modification and production efforts. What is needed is a comprehensive set of guidelines establishing the limits and allowable practices of local school organizations in their adaptation of criterion tests that have been adopted by the U. S. Office of Education as parts of their cost accountability--program effectiveness system. The concept of norming components tests rather that omnibus tests (i.e., favoring those of greater factorial unity) would make much easier the making of decisions of when to allow the broadening or narrowing of an adopted evaluation device in the interest of better local fit. In line with these recommendations, local districts may need even more to receive consultation and specific guidance in their preparation of objectives and their evaluation of implementation, because product evaluation of necessity assumes but leaves untested the adequacy of these antecedent processes. And again a more integral connection between programs and measurement research efforts could provide new answers to these needs.

If the development of new tests is warranted, it is in those areas where programs make promises to affect the child in ways which they claim are not adequately assessable by present methods. While these claims are not necessarily evasive (although one can hope that the preceding section on "Matches" will discourage some uninformed claims about the elusiveness of particular outcomes), they do deserve careful scrutiny in an era of increased cost sensibility. For this cause, it is recommended that a formal screening procedure be established in U.S.O.E. whereby those making such claims regarding their programs may submit them to unusually qualified scrutiny, without prejudice, as a part of the process whereby proposals are reviewed. Those responsible for such a screening procedure should be prepared to (1) recommend suitable measures subject to the contract bidder's further examination and possible acceptance or (2) recommend concurrent studies of new measures to be conducted during the course of the program.

Objectives areas in which instrumentation appears to be clearly inadequate, to the extent of making new instruments welcome additions are: P-3-2 for parental completion or for teacher interview of parent; C-1; A-22 and A-23; and A-28. Further instrumentation in P-1 and P-5 seems desirable and might lead to enough additional knowledge to warrant formulating objectives. In P-8 and A-46 there is an almost total silence in the literature, suggesting that procedures for measuring these child characteristics would be first steps toward understanding them. The exclusion of other areas does not imply uniformly satisfactory measurement but only that existing approaches are worthy of further validation study. No intent exists to discourage new measurement work in these

other areas. In fact, it is to be encouraged specifically under the conditions mentioned in the following paragraph.

Another area in which new measures might be justified would be in the reduction of the Technical Procedures and Observational Procedures of Report III, Part B to forms which could more readily be used by in-school personnel. Some admirable examples of progress in just this kind of translation process are evident in recent test developments related to language, self-concept, internal controls, information processing styles, conceptual behavior, and global aspects of personality among five-year-olds.

If all of the above-recommended, measurement-related functions are not to result in a proliferation of uncoordinated subagency efforts within U.S.O.E., then the creation of an office responsible for and empowered to coordinate such efforts would seem a priority--that is, U.S.O.E. needs a measurement and evaluation team capable of coordinating these functions and contracting for new work in support of detected program needs for measurement development.

Finally, the process of assessment delivery itself deserves systematic attention. Considerable evidence has been adduced in a growing literature favoring the conclusion that the conditions of testing can be so managed as to enhance or depress differentially the performance of various sub-groups of children. Several representative selections from that literature are listed in Appendix D of this report. They are easily identified by the manifest content of their titles, so are not listed separately here. A report to evaluators and practitioners, based on this literature, should be prepared drawing particular attention to the known effects of

varying testing conditions upon particular demographic subgroups (i.e., a critical and synthetic review of this literature). Such a report might do much to offset some continuing abuses of testing with children from minority groups and further insure more believable evaluations. The preparation of such a report in language and style compatible with field distribution should be viewed as a priority recommendation. Too much is known now to assume that all children can be subjected to the same assessment procedures with equivalent results. The patent frivolity of such a suggestion as regards five-year-olds makes a propos the inclusion of this recommendation in this final report. Further, the possibility of using the testing situation to teach children responsiveness to cognitive demands and to impart test-wiseness ought not to be overlooked. Some compensatory programs seem not to have been highly successful in these very respects.

The recommendations as given above have pointed out a new direction for U.S.O.E. pertaining to the norming of evaluation instruments and to the possible contribution that such norming could make if careful attention were directed to demographic subgroup sampling and reporting in test manuals. It has further been shown how across-time, normative, subpopulation standardization of tests could be conducted without increasing (and probably by actually reducing) the current national cost of evaluation. Except for the few designated areas cited, the need for developing new tests has been found to be less urgent than the standardization and demographic norming of existing tests. These recommendations have been made after careful scrutiny of both evaluation instruments and developmental characteristics of five-year-old children and, therefore, warrant careful consideration.

APPENDIX A

Circle Code Abstract Sheet (Abstract # _____)

Author (s) _____

1st Author Affiliation or Address _____

Title _____

Publisher or Publication _____

Volume-date-pages (or document source) _____

Research setting _____

C.6 Negro Age 3=1; 4=2; Nusery School=3; 5=4; Headstart & Kindergarten-5; 3,4=6; 4,5=7; 3,4,5=8; over 5=9
NS's _____, _____, _____

C.7 Anglo Age 3=1; 4=2; Nursery School=3; 5=4; Headstart & Kindergarten=5; 3,4=6; 4,5=7; 3,4,5=8; over 5=9
NS's _____, _____, _____

C.8 Spanish Surname Age 3=1; 4=2; Nursery School=3; 5=4; Headstart & Kindergarten=5; 3,4=6; 4,5=7; 3,4,5=8; over 5=9
NS's _____, _____, _____

C.9 Indian Age 3=1; 4=2; Nursery School=3; 5=4; Headstart & Kindergarten=5; 3,4=6; 4,5=7; 3,4,5=8; over 5=9
NS's _____, _____, _____

C.10 Mixed 3=1; 4=2; Nursery School=3; 5=4; Headstart & Kindergarten=5; 3,4=6; 4,5=7; 3,4,5=8; over 5=9
NS's _____, _____, _____

C.11 Socio Economic Level (Guide #2) Hi=4, Med=3, UL=2, LL=1, Mixed=5
A1. School Type Nursery School, Kindergarten, Day Care, Headstart, Other
A2. Rationale Criterion groups, conforms to theoretical position, correlates with existing measure.

C.12.13 Year Standardized If Available=_____, If Not Available=Blank

C.14 Scored by: Machine=1, Hand direct=2, Hand converted=3, Mixed=4, Reusable=_____

C.15 Scoring Service Available Yes=1 No=2

C.16 Score Conversion Tables Yes=1 No=2

C.17 Administration Group Size: Individual=1; 2-3=2; 4-6=3; 6-10=4; 10-15=5; over 15=6; mixed=7

C.18 Administered by classroom teacher=1; Teacher with moderate training=2; Specialist=3; Mixed=4; Parents=5

C.19 Test Type Individual Manipulatives=1; Visuals=2; Systems=3; Mixed=4; Auditory=5

C.20 Response type oral=1; mark=2; arrange=3; point=4; mixed=5

C.21 Timed Yes=1 No=2 _____(Amt.)_____

C.34,35,36 Measurement (Cognitive, See Guides)

C.37-38;39-40;41-42 Measurement (Affective, See Guides)

C.43,44,45 Measurement (Psychomotor, See Guides)

Continuation cols:		
	cognitive measurement	46, 47, 48
	affective measurement	49-50, 51-52, 53-54
	psychomotor measurement	55, 56, 57

APPENDIX B

Coding Guides

Guide #1
(Columns 34 to 57)
Categories for the Constructs and Behaviors Measured

Code (Cols. 34, 35, 36, 46, 47, 48--Cognitive)

0 Ability: specific

1 Attentional processes (selective, directed, set)

2 Concepts (categorization, classification, similarity matching, labelling, concept attainment)

3 Creative processes (imagination, intuition, creative play) (See also Psychomotor: 1)

4 Intelligence: general (verbal, nonverbal)

5 Language (excluding sound production) (See also Psychomotor: 7)

6 Mediational processes (information processing, mediated generalization, sequencing in idea production, higher associative processes)

7 Memory (serial, paired associate, general content)

8 Perceptual (sensory coordination, perception of sequential events, cognitive styles, recognition, closure, flicker fusion) (See also Psychomotor: 4)

9 Piagetian tasks and related general cognitive-theory based tasks (sensory-tonic field theory, Gesellian, Problem solving)

Code (Cols. 43, 44, 45, 55, 56, 57--Psychomotor)

0 Balance, movement, and coordination (Static or Dynamic, with or without apparatus, gross motor, kinesics)

1 Construction with manipulables (See also Cognitive: 3)

2 Dominance, handedness, laterality, eye dominance

3 Growth and maturation (skeletal age, somatic proportions)

4 Perceptual-motor (fine motor, drawing, copying, hand-eye coordination, sensory and motor aspects of perception) (See also Cognitive: 8)

5 Play

6 Self-care activities (dressing, toileting, grooming, feeding)

7 Speech: Motor aspects (See also Cognitive: 5)

8 Vitality (endurance, fatigue, recovery)

9 (Open Category)

Code (Cols. 37-38, 39-40, 41-42, 49-50, 51-52, 53-54--Affective)

Social behaviors

1 Aggression / Empathy
2 Dominance / Submission / Resistance / Assertiveness
3 Situational factors maintaining interpersonal behavior
4 Familial factors maintaining or teaching interpersonal behavior
5 Imitation and vicarious imitation
6 Identification and imitation / Role taking
7 Resistance to temptation / Dependency / Leniency toward dishonesty
8 Dependency
9 Transgression related behaviors (guilt, defenses)
10 Maturity / Responsibility / Self-directed behaviors / Autonomy / Competence
11 Sex-typing
12 Pro-social approach / Cooperation / Sharing / Generosity
13 Introversion-extroversion
14 Conformity / Acquiescence-negativism
15 Social Skills / Knowledge of social skills

Social perceptions and communications

16 Abstract awareness of ethnicity, SES
17 Self-awareness with reference to categorical membership or face-to-face other-awareness
18 Perceptions of school and learning
19 Abstraction in social reference, social desirability
20 Social perceptions, other
21 Social preference / Sociometry
22 Emotional communication
23 Awareness of affect

Motivation

24 Threats / Punishment
25 Failure / Success / Frustration / Behavior constraints
26 Rewards / Reward schedules / Delay of reward
27 Stimulus variation / Novelty / Complexity / Expectancy violation
28 History of preferential behavior / Interests / Attitudes / Values

29 Types and agents of rewards / Attention holders / Secondary reinforcers
30 Peer maintenance of behavior
31 Higher needs, motives (achievement, affiliation, curiosity)
32 Teacher maintenance of behavior (e.g., by attention)

Intra-psychic factors

33 Neuroticism versus acting out
34 Orderliness
35 Creativity / Playfulness / Tolerance of ambiguity
36 Self concept (apart from social position) / Body image
37 General personality (test or rating scale) / Morality
38 School, social or personal adjustment
39 Activity level or energy
40 Characteristic emotional state / Mood / Stress reactions / Tension release
41 Locus of control
42 Reactivity to stimulation (threshold, intensity)
43 Inhibitory behaviors / Inner controls / Impulsivity
44 Fantasy content
45 Responses to cognitive demands / Task persistence
46 Humor
47 Attachment / Detachment

Social-cultural-familial influences

48 On program related gains
49 On general development

Guide #2
(Column 11)
Socioeconomic Level

Code

4 Upper - Children of administrators, executives, higher level professionals, entertainers, military commanders, higher level politicians, independently wealthy. Many samples designated "high" are really middle class. Income will not be used, since the index varies from time to time.

3 Middle - Small business owners, foremen, white collar workers, larger farm operators, middle and lower level professionals, some service workers (more subtle factors separate these into UL and Middle), technicians, engineers. These persons are usually salaried.

2 UL - Upper lower class - blue collar workers (may have as high or higher income than white collar but are "working class" oriented),

small farmer, tradesmen, semi-skilled, many service workers (e.g., laundry, food service), truckers. These persons usually work for wages. Some of the "technically" disadvantaged fit here.

1 LL - Lower lower class - unskilled, unskilled or minimally skilled workers, the unemployed, many of the disabled, the tenant farmers, migrants, welfare families. Lower lower is perhaps best understood as involving a style of life created by the uncertainties and tensions of poverty and the traits of instability, restlessness, external locus of control, apathy, and a sense of powerlessness.

APPENDIX C

Directory of Publishers

Publisher	Address
Adkins, Dorothy C.	College of Education University of Hawaii 1776 U Avenue Honolulu, Hawaii 96822
Allen, Doris Twitchell	2447 Clybourn Place Cincinnati, Ohio 45219
Allen, Robert L.	Tempe Wick Road Morristown, New Jersey 07960
Allyn and Bacon, Inc.	150 Tremont Street Boston, Massachusetts 02111
Ambco Electronics, Inc.	1222 West Washington Blvd. Los Angeles, California 90007
American Foundation for the Blind, Inc.	15 West 16th Street New York, New York 10011
American Guidance Service	Publishers Building Circle Pines, Minnesota 55014
American Optical Company	Vision Park Southbridge, Massachusetts 01550
American Orthopsychiatric Association, Inc.	1790 Broadway New York, New York 10019
Appalachia Educational Laboratory	Charleston, West Virginia 25321
Australian Council for Educational Research	9 Frederick Street Hawthorn, Victoria, Australia 3122
Badger Tests Co., Ltd.	17-18 St. Dunston's Hill London E. C. 2, England
Baisden, Joyce B.	2021 East Lemon Heights Drive Santa Ana, California 92705
Baltimore City Public Schools	Bureau of Educational Testing Administration Building Calvert and 23rd Street Baltimore, Maryland 21418

Bausch and Lomb, Inc.	Rochester, New York 14602
Beller, E. Kuno	Department of Psychology Temple University Philadelphia, Pennsylvania 19122
Betts, G. L.	1035 Reedy Avenue Reedley, California 93654
Bobbs-Merrill	4300 East 62nd Street Indianapolis, Indiana 46206
Brandt, Richard	Professor of Education University of Virginia Charlottesville, Virginia 22901
Brigham Young University (See University Press)	
The Brora Centre	245 Davenport Road Toronto 180, Canada
Burdock, E. I.	Biometrics Research State of New York Deptartment of Mental Hygiene 722 West 168th Street New York, New York 10032
Bureau of Educational Measurement	Kansas State Teachers College Emporia, Kansas 66801
Bureau of Publications (See Teachers College Press)	
Caldwell, Bettye	Center for Early Education and Development 814 Sherman Little Rock, Arkansas 72202
California Test Bureau	Del Monte Research Park Monterey, California 93940
Cal-State Bookstore	25776 Hillary Street Hayward, California 94542
Campus Publishers	Ann Arbor, Michigan 48104
Campus Stores	University of Iowa Iowa City, Iowa 52240
Carlson, Rae	5454 Wisconsin Avenue Chevy Chase, Maryland 20015

Cerebral Palsy Review	Institute of Logopedics, Inc. 2400 Jardine Drive Wichita, Kansas 67219
Cervenka, Edward John	Teachers College Columbia University New York, New York 10026
Child Guidance Clinic	Mooseheart, Illinois 60539
Chronicle Guidance Publications, Inc.	Moravia, New York 13118
Cincinnati Public Schools	Division of Program Research and Design Department of Instruction Cincinnati, Ohio 42502
College Printing and Typing Company	Madison, Wisconsin 53701
Colvin, Ralph	Child Welfare League of America, Inc. 44 East 23rd Street New York, New York 10010
Committee on Diagnostic Reading Tests, Inc.	Mountain Home, North Carolina 28758
Consulting Psychologists Press	577 College Avenue Palo Alto, California 94306
C. P. S., Inc.	P. O. Box 83 Larchmont, New York 10538
Crabtree, Margaret	10133 Bassoon Houston, Texas 77025
Department of Instruction	Cincinnati Public Schools Cincinnati, Ohio 45201
Deutsch, Martin	465 West End Avenue New York, New York 10024
The Devereux Foundation Press	Devon, Pennsylvania 19333
Dockar-Drysdale, B. E.	Mulberry Bush School Standlake, Oxfordshire, England
Early Childhood Research Center	1063 Gayley Avenue Los Angeles, California 90024
EDCODYNE	3724 West Chapin Avenue Orange, California 92666

Educational and Industrial Testing Service	P. O. Box 7234 San Diego, California 92107
Educational Service Company	P. O. Box 1882 Grand Rapids, Michigan 49501
Educational Test Bureau	Division of American Guidance Service, Inc. 720 Washington Avenue, S. E. Minneapolis, Minnesota 55414
Educational Testing Service	Princeton, New Jersey 08540
Ellinwood, Beverly W.	Specialist Bureau of Instructional Research Baltimore City Public Schools 2330 St. Paul Street Baltimore, Maryland 21218
Escalona, Sibylle K.	Albert Einstein College of Medicine Department of Psychiatry Eastchester Road and Morris Park Avenue Bronx, New York 10461
ETS (See Educational Testing Service)	
Expression Company	Magnolia, Massachusetts 01931
Feldman, Bernard	1531 Stanford Avenue Redondo Beach, California 90278
Feldmann, Shirly C.	3333 Henry Hudson Parkway Bronx, New York 10463
Fels Research Institute	Antioch College Yellow Springs, Ohio 45387
Follett Publishing Company	1010 West Washington Boulevard Chicago, Illinois 60607
Freeman Technical Associates	1206 Benjamin Franklin Drive Sarasota, Florida 33577
Robert Gibson and Sons (Glasgow), Ltd.	2 West Regent Street Glasgow, C. 2, Scotland
Griffin-Patterson Co., Inc.	544 West Colorado Blvd. Glendale, California 91204
Gross, Ruth B.	Central Psychiatric Clinic Cincinnati General Hospital Cincinnati, Ohio 45229

Grune and Stratton, Inc.	381 Park Avenue, South New York, New York 10016
Guidance Centre	Ontario College of Education, University of Toronto 371 Blor Street, West Toronto 5, Ontario, Canada
Guidance Testing Associates	6516 Shirley Avenue Austin, Texas 78752
C. S. Hammond and Company	Maplewood, New Jersey 07040
Harcourt, Brace, and World, Inc.	755 Caldwell Avenue Chicago, Illinois 60648
Harcourt, Brace, and Jovanovich (See Harcourt, Brace, and World)	
George C. Harrup and Company, Ltd.	182 High Holborn London, W. C. 1, England
Harvard University Press	79 Garden Street Cambridge, Massachusetts 02138
Hellersberg, Elizabeth F.	P. O. Box 104 Harvard, Massachusetts 01451
Hiskey, M. S.	15th and Vine Lincoln, Nebraska 68508
Houghton Mifflin Company	110 Tremont Street Boston, Massachusetts 02107 also: 1900 South Batavia Avenue Geneva, Illinois 60134
Houston Test Company	P. O. Box 35152 Houston, Texas 77035
Institute for Personality and Ability Testing	1602 Coronado Drive Champaign, Illinois 61820
Joel, Walther	11973 Sanvicente Blvd. Los Angeles, California 90049
Johns Hopkins Press	Homewood Baltimore, Maryland 21218
Journal of Clinical Psychology	4 Conant Square Brandon, Vermont 05733

Karnes, Merle B.	PEECH Project University of Illinois at Urbana-Champaign 403 East Healey Street Champaign, Illinois 61820
Keystone View Company	Meadville, Pennsylvania 16335
Klaus, Rupert	414 West Clark Blvd. Murfreesboro, Tennessee 37130
Klove, Hallgrim	Department of Neurology University of Wisconsin School of Medicine Madison, Wisconsin 53706
Kohn, Martin	Research Psychologist The William Alanson White Institute 20 West 74th Street New York, New York 10023
Kyle, David	Institute of Child Study University of Maryland College Park, Maryland 20740
Lafayette Instruments Company	North 26th Street and 52 By-Pass Lafayette, Indiana 47902
Language Research Associates	950 East 59th Street Box 95 Chicago, Illinois 60637
H. K. Lewis and Company, Ltd.	136 Gower Street London, W. C. 1, England
J. B. Lippincott Company	East Washington Square Philadelphia, Pennsylvania 19105
E. and S. Livingston, Ltd.	15-17 Teviot Place Edinburgh I, Scotland
McCandless, Boyd	Psychology Department Emory University Atlanta, Georgia 30322
McDaniel, Elizabeth	Institute of Aerospace Management University of Southern California Los Angeles, California 90007
Maico Electronics, Inc.	21 North Third Street Minneapolis, Minnesota 55401

Merrill-Palmer Institute	71 East Ferry Avenue Detroit, Michigan 48202
Charles E. Merrill Publishing Company	1300 Alum Creek Drive Columbus, Ohio 43216
Methuen and Company, Ltd.	36 Essex Street, Strand London, W. C. 2, England
Miller, James O.	617 East Colorado Avenue Urbana, Illinois 61801
Mills Center, Inc.	1512 East Broward Blvd. Ft. Lauderdale, Florida 33301
Mitzel, Adele	Specialist in Individual Testing Educational Testing Services Baltimore City Public Schools Calvert and 23rd Streets Baltimore, Maryland 21218
Montana Reading Clinic Publications	517 Rimrock Road Billings, Montana 59102
Joseph E. Moore and Associates	4406 Jett Road, Northwest Atlanta, Georgia 30314
Moss, Margaret H.	22 Chesterford Gard London, N. W. 3, England
National Bureau of Educational and Social Research	Department of Education, Arts, and Science Private Bag 122 Pretoria, Republic of South Africa
National Foundation for Educational Research (NFER) in England and Wales	"The Mere", Upton Park Slough, Bucks, England
NEA Service Inc.	1200 West 3rd Street Cleveland, Ohio 44113
NFER (See National Foundation for Educational Research)	
North Jersey Training School	Totowa, New Jersey 08753
Northway, Mary L.	The BRORA Centre 245 Davenport Road Toronto 180, Canada
Office of Child Development	Head Start Office 1111 18th Street, N. W. Washington, D. C. 20036

Oliver and Boyd, Ltd.	Tweeddale Court 14 High Street Edinburgh 1, Scotland
Orpet, Russel E.	3511 Fela Avenue Long Beach, California 90808
Ozer, Mark N.	Associate Neurologist Children's Hospital of the District of Columbia 2125 Thirteenth Street, N.W. Washington, D. C. 20009
Park, John C.	927 Fifteenth Street, N. W. 306 Carry Building Washington, D. C. 20005
Personnel Press Inc.	20 Nassau Street Princeton, New Jersey 08540
Pennsylvania State University	Audio-Visual Services 6 Willard Building University Park, Pennsylvania 16802
Pikunis, Justin	Psychology Department University of Detroit Detroit, Michigan 48221
Preschool Project	Laboratory of Human Development Graduate School of Education Harvard University Cambridge, Massachusetts 02138
Priority Innovations, Inc.	P. O. Box 792 Skokie, Illinois 60076
Programs for Education	Box 85 Lumberville, Pennsylvania 18933
Provus, M. M.	Pittsburgh Public Schools 341 South Bellefield Avenue Pittsburgh, Pennsylvania 15213
Psychodiagnostic Test Company	Box 528 East Lansing, Michigan 48823
Psychodynamic Instruments	Box 1221 Ann Arbor, Michigan 48106
Psychological Corporation	304 East 45th Street New York, New York 10017

Psychological Research and Development Corporation	420 West Lafayette Street Tampa, Florida 33606
Psychological Test Specialists	Box 1441 Missoula, Montana 59801
The Psychologists and Educators Press	419 Pendik Jacksonville, Illinois 62650
Psychometric Affiliates	Chicago Plaza Brookport, Illinois 62910
Public School Publishing Company (See Bobbs-Merrill)	
Pumroy, Donald K.	University of Maryland College Park, Maryland 20742
Reitan, Ralph	Neuropsychology Laboratory Indiana University Medical Center 1100 West Michigan Street Indianapolis, Indiana 46207
Research Concepts	1368 East Airport Road Muskegon, Michigan 49444
Research Division	Bank Street College of Education 69 Bank Street New York, New York 10014
Risley, Todd	Third and Stewart Street Kansas City, Kansas 66101
R K A Publishing Company	3551 Aurora Circle Memphis, Tennessee 38111
Rosenzweig, Saul	8029 Washington Street St. Louis, Missouri 63114
Ryerson Press	299 Queen Street, West Toronto 2 B, Ontario, Canada
Santa Clara Unified School District	1889 Laurence Road Box 397 Santa Clara, California 95052
Santostefano, Sebastiano	82 East Concord Avenue Boston, Massachusetts 02118
Sapir, Selma G.	60 Biltmore Avenue Yonkers, New York 10710

Sassenrath, Julius M.	Department of Education University of California Davis Davis, California 95616
Schachter, Frances	Bank Street College of Education 4475 Waldo Avenue Riverdale, New York 10032
Scholastic Testing Service	430 Meyer Road Bensenville, Illinois 60106
Science Research Associates	259 East Erie Street Chicago, Illinois 60611
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PART D--

TITLES I AND III PROGRAM-EVALUATION SURVEY INSTRUMENTS: SCOPE AND DESIGN

INTRODUCTION

At the time that the U.S.O.E. issued its request for proposal, and the proposal covering this project was prepared, their plans were to use directly in their own evaluation efforts those portions of the project report appearing here as Report III, Parts D and E. Subsequently, due to internal shifts in plans within U.S.O.E., it seemed advisable to devote greater effort to those portions of the project which have been reported previously in Reports I and II, and in III A, B, and C. Parts D and E of Report III were not to be deleted but were to be downgraded. Unfortunately, it has been impossible within the contractual framework to downgrade this portion. This fact has perhaps involved us in a purely academic exercise. We have chosen, nevertheless, to speak directly to the issues raised in our original proposal. We have hoped in this way to point up the directions to be taken if satisfactory answers are to be made available to U.S.O.E. in response to its future early childhood management and planning requirements, based on its experience with Titles I and III programs.

One need of U.S.O.E. originally was for the specification of variables to be included in any instrumentation to be used in its preschool program survey for Titles I and III. It was desired that, together with the sampling recommendations of Part E, an instrument operationalizing the variables of Part D would constitute an evaluation system for answering the following questions:

a. Which characteristics of preschool pupils are related to to later success in primary school?

b. What are the characteristics of pupils who participate in programs and services provided by Federal funds?

c. What are the characteristics of the programs and services being provided to preschool children by Federal funds?

d. What is the relationship between pupil participation in special preschool programs and services, the home and school environment, and pupil development as measured by tests and teacher perceptions of classroom behaviors?

e. What is the relationship between the needs of the pupil, the preschool services and programs available to him, and the programs and services in which he participates?

Question a can be spoken to by drawing upon family demographic and general environmental variables and upon measured characteristics of the child. There is also implied in a the need for at least short-term longitudinal assessment up into the primary grades. Further, these data are to be looked at relationally. These requirements taken together suggest that either the individual child or sets of minimally demographically-subgrouped children within a program would be the basic units for examination. Our preference is for the former, but we have judged that U.S.O.E. will for various reasons prefer the latter. Thus, in our recommendations regarding variables we have anticipated the latter. This is discussed further in Part E. To prepare data for the longitudinal question, they will need to be stored across-time counting by demographic subunits within each program. This is basically accomplished by frequency recording. Its data all come from the same sources as those for answering question a.

Question c asks for descriptions of programs and services. As we have remarked before in these reports, programs cannot be as satisfactorily codified at present as can behavioral characteristics. For this reason and to guarantee that the investment in a longitudinal study will produce a reasonable information return, it has seemed well to describe programs in a large variety of ways with reference to qualitative indicators of

programs and services delivered, their guiding orientations or philosophies, and their types of instructional activities. Oversampling of program variables is what we recommend. This will guarantee, by creating a potential for subsequent recombining of variables that the actual program delivered to children can in some objective way be defined at a future time. While the recording of these data may appear to be a tedious chore or an overkill, it is essential in this case. Question d, as a longitudinal question, requires no new data, but across-time examination of selected interrelationships of the data already specified with reference to questions a and c. Question e requires no new data. It can be examined for child needs either by direct behavioral measures or indirectly through child demographic indicators. These are then to be compared with the kinds of preschool program features to which such children are being exposed. Logical analysis of goodness of fit of programs to needs will be required after the descriptive empirical findings are assembled.

When questions a through e have been answered in this manner, by the data collection and analysis indicated, it will be possible to answer certain crucial Office of Education management questions:

a. At what level should U.S.O.E. fund preschool programs?

b. What are the unmet needs of preschool pupils and preschool age children?

c. Should U.S.O.E. fund new programs to meet unmet needs or to extend existing programs?

d. What types of programs are working?

e. On which projects should U.S.O.E. disseminate information?

f. Should new legislation be written in the area of preschool programs?

g. Should legislation or guidelines specify that funds be targeted to aid specific minority, ethnic or disadvantaged groups?

A Data Gathering Instrument

We have judged that the most straightforward method of indicating what kinds of data should be gathered was to create a survey instrument designed to gather all of the required information. This instrument--given the acronym SPEC for SURVEY OF PROGRAM IN EARLY CHILDHOOD--Provides comprehensive coverage of the needed data and thus embodies in itself our recommendations for what variables shall be studied. The SPEC appears hereafter at the close of this section. Before its appearance, however, other related matters require discussion. First the general features of the SPEC's contents and organization will be examined. This is followed by brief suggestions for its use as a Title I and III project report document. Next its possible limitations and strengths are discussed. These are related, in this discussion, to the "Recommendations" section of Part C of this report. Finally, specific recommendations are made for a brief, related survey device to be constructed for use at supra-program or project management levels, e.g., by responsible state officers.

Items 1-4 of the SPEC identify the funded program and its reporting officer. Items 5-8 sketch out the most general of the program's or project's characteristics. Six sections of program quality indicators follow: (1) items 9-16C are most general on expenditures, facilities, and direct instructional support personnel; (2) items 17A-I deal with qualifications

of personnel and duration of the child's weekly exposure to program; (3) items 18-27 provide the number and kinds of outdoor equipment available; (4) items 28-55 describe the number and kinds of indoor equipment and supplies, with U.S.O.E. contribution calculated for 3 and 4; (5) items 56-64 deal with quality less obviously by examining grouping practices; and (6) items 65-77 inspect quality through the ways that evaluation is used in the program.

At this point the questioning shifts to the substance of the program's educational focus. Items 78-95 use a checklist and an estimation of percentage of influence to get rapidly into the philosophical-methodological sources of the program's inspiration and direction. Because the real effects of programs on children are, however, directly mediated through what is done in the program, attention is given in items 96-138 to finding out which activities command the greatest time priority. Such a list can also be examined subsequently to determine what patterns of activities emerge as more fundamentally beneficial to children having which kinds of behavioral and demographic characteristics. Interrelationships between this list and the preceding list should also prove functional for describing what activities are commonly used by programs that presumably adhere to particular stated orientations. Such knowledge is fundamental to our efforts to move beyond the current gross conceptual tools that are available for describing what a particular program is, i.e., to move beyond the current atmosphere of name-calling and program identity formation by factionalism. Finally, brief attention is turned in items 139-143 to the process of implementation of program into practice. As we have indicated before, this is a most neglected area of evaluation. This

concludes the SPEC's description of program. To our knowledge, this is the most comprehensive attempt to date to incorporate within a survey instrument the fundamental dimensions of programs--yet we do this in a most humble spirit in full knowledge of the many items of information requested which will ultimately prove to be pure chaff. Hopefully, some more informative item groupings will emerge and endure for incorporation into later more sophisticated inquiries on such matters than is our own. Auxiliary services provided in conjunction with programs are treated separately.

Items 144-146 sketch out in grossest terms some demographic features of the child populations served. Together with other demographic indices that can be derived directly from later questions, these form the basis for constituting the demographic subgroup sampling and test norming system which we advocated in Part C of this report. It also provides a minimal categorical system for defining what kinds of children are the recipients of services. This is expanded and greatly increased in precision by the behavioral indicators requested in items 147-152. Our recommendation is that at least two behavioral characteristics shall be measured, from each of the domains: Cognitive, Affective, and Psychomotor. These shall be chosen from among the subset of selected characteristics listed beside items 147-152 of the SPEC such as to be sensitive to both the potential strengths and soft areas of the particular programs in which they are used. In this way it can be seen whether a particular program holds up well across these varied domains of developmental behavior or whether its effects are more narrowly circumscribed. It also will guard against potentially retarding or deleterious effects upon the child's

total development, which might pass undetected if this more comprehensive approach to behavioral evaluation were not undertaken.

Further child program recipient census information is tabulated in items 153-162 with reference to public and non-public program affiliation. Items 163-209 explore family and community influences upon the child. These data are basic to the description of the child's home environment and his needs. The instrument concludes with an inquiry in items 210-233 into auxiliary services available to the child through the program, including a few which are directed to parents as well as the child.

Integrating the SPEC into Programs

It is of course to be expected that the completion of so long a list of questions might prove a deterrent to conscientious and thoughtful replies if some procedure were not devised to increase the respondent's commitment. Because such evaluation does not occupy the highest position in the commitments of many program directors, this need for a procedure is further intensified. Two suggestions are offered. The properly completed survey should count as a substantial part of the program or project final report--serving in lieu of many laboriously wrought narrative pages. A narrative final report should cover only such matters as are not adequately articulated within the SPEC. What these supplemental areas of the final report might be should be included in the program director's original grant proposal. In this way he would have apprised himself of the role of the SPEC in the evaluation of his own program and would understand that to neglect its completion would render his final

report incomplete and would hence reflect upon his contract performance. Only so long as evaluation is allowed to remain extrinsic to program function and contractual agreement will forms be filed and not returned. Making their completion integral to the program director's normal functions would, on the other hand, encourage his thoughtful attention.

Strengths and Limitations of the SPEC

As persons acquainted with the strengths of particular types of instrumentation, we are not overly impressed with survey instruments. Their fallibility is legendary. We have created the SPEC, a survey instrument, in keeping with U.S.O.E. custom of usage and in line with their stated desires in the request for proposal. It has become the fashion among researchers to lament the methodological softness of Federal agencies in their reliance upon the survey instrument. We see this agency predilection as arising from the operations of and personnel associated with them. These preferences are not, thus, to be easily turned about and redirected, since they are reflections of the total ecological schematization within which methodological decision making occurs. For us, therefore, the issue cannot simply be reduced to either siding totally with or totally confronting a set of data gathering practices. We have chosen the alternative of working within this system to change it. That is, we have sought within the framework of a survey instrument to do some different kinds of things.

First, in the suggestions of the preceding section we have pointed out how intrinsic motivation--or at minimum a degree of ego involvement--

should and can be created. Everyone knows that survey instruments are supposed to become more valid when this is accomplished. Federal action surely should be taken to create such motivation--or else to quit sending out forms to be recycled as waste. Second, we have incorporated certain subtle features into scales that should diminish grosser forms of social desirability response bias by their completers. These features are in fact sufficiently subtle that we are not ourselves yet willing to make strong predictions about which of some qualitative program features will more favorably affect five-year-olds. Our real confidence is that several relevant variables for such prediction might be extractable from these program items. Third, we have included hard data within the survey in each of the major areas of variable sampling: (1) program implementation is to be looked at with at least one in-depth or process measure (see item 143); (2) a wide range of child behavioral characteristics are to be studied (see items 147-152); and (3) in-depth analysis is to be performed using one family or community measure (see item 209). Fourth, it is expected that hard, criterion-referenced data will be gathered in the hallmark areas of the program, i.e., in areas closely linked to the program's distinctive goals. Provision is made for these in items 71 and 74-77. Thus, we have produced what is still recognizable and usable as a survey instrument, yet which includes features which should commend it to those who decry survey instrument usage.

The above recommendations for the inclusion of the three groups of in-depth measures cannot be lightly dismissed, because we have carefully documented particularly in all of Report II and Report III, Part C-"Recommendations", the urgent need to have better answers to these questions. We have also in Report I-"Conclusions", Report II-"Summary, Conclusions,

and Prospectus", and Report III, Part C-"Recommendations" pointed to the potential boon to both programs and early childhood research that would result from a Federally-encouraged, closer working relationship between them. This closer working relationship would make more believable the capability of early childhood programs to deliver the hard data required for the completion of SPEC developmental items 143, 147-152, and 209, and criterion-referenced items 71 and 74-77. It would in turn make more probable their being able to conduct the kind of formative evaluation that is also desperately needed in programs. (In this connection see comments on pages 20-21 of this report.)"

Survey Requirements at Other Levels

Program data gathering forms must of course be prepared to collect and accumulate the information required for the SPEC's completion. Their design and content readily follow from item-by-item scrutiny of the SPEC. At supra-program levels, other kinds of questions must be posed regarding the management of Title I and III programs. The kinds of questions to be written for them must deal with at least the following matters: What projections can be made that parents will participate in programs that plan to involve them? By what procedures is the degree of that participation projected? Are procedures established for determining the compatability of proposed curriculum with stated goals? How does the agency determine whether criterion measures are appropriately related to program goals (see items 71, 74-77 especially)? How are specific service delivery capabilities screened for schools submitting Title III and I proposals? What procedures are established to evaluate the extent of a "lobbying"

role of education package vendors upon particular proposal decisions? Is the real willingness of schools to work cooperatively with other community agencies being encouraged as extensively as possible through Title I and III participation? Are implementation plans screened for realism and precision? Are central office biases of orientation made sufficiently explicit in policy statements that they can be reckoned with objectively in the decision making process? In this last connection, examining a small, random sample of state-rejected proposals could provide information regarding the extent to which these biases might cause acceptable innovation proposals to be overlooked. Rejected proposals would need to be kept on file by the original screener for some minimal period to make them available for such later examination.

Finally, U.S.O.E. should consider preparing guidelines and an instrument that can be used to consensually validate the so-called "content validity" of criterion referenced measures. At present much of this judging is done loosely by persons who have never been trained or personally standardized as judges of the content validity of those areas in which they are operating. Their work appears highly subjective. The creation of a recommended procedure and forms for field use would probably elevate considerably the quality of criterion reference measures. It would also curb some instantaneous but questionably professional, criterion-referenced expertise which has recently gained entry into the inner sanctums of educational innovation. We contend that judging content appropriateness is worthy of having its own validating procedure. It will no longer do to accept boldly dropped disclaimers--presumably on grounds that psychometric standards are not applicable to such devices. Although traditional

psychometric standards are strained by such instruments, what should be equally clear is that the need for objectivity has not suddenly been suspended.

SURVEY OF PROGRAM IN EARLY CHILDHOOD (SPEC): FOR TITLE I OR III EVALUATION

Directions: Complete all applicable parts, following guides provided. Use overflow sheet as often as needed by entering symbol Cf at the end of any line that is to be continued. Follow it with the number of the entry that is to be continued. Keep all entries on overflow sheet(s) numbered and sequential by this same code. A separate SPEC is to be completed for each separate grant for program or project. EC is used throughout for Early Childhood. Where answer options are pre-stated CIRCLE the most accurate choice or CIRCLE multiple choices where applicable.

1. Program Director or Other Person completing SPEC. (If other than Director, indicate relationship to program.):_____

_____

2. Program or Project name:_____

3. Where located--Street Address:_____

4. Where located--City, State, Zip:_____

Program Characteristics, General

5. Title I, Title III?

6. Program's or Project's distinctive features (25 word maximum):_____

_____

_____

7. Program or Project goals (list by codes from Guide I; these may be supplemented with brief qualifying remarks; be sure to use overflow page if Guide I could not be used or space here is insufficient):_____

_____

_____

8. If your program or project has multiple phases, this report covers:

Not Applicable Planning Phase Pilot Phase Operational Phase

Program Indicators, General

9. Per child annual EC expenditure by school on equipment and materials:

_____

10. Nap facilities available: Cots Mats Other(Specify)_____ None

11. Total square feet of indoor space reserved for this EC activity:_____

12. Total square feet of outdoor space reserved for this EC activity:_____

_____. If not reserved, but separately scheduled, indicate total daily hours avilability_____ and longest time interval separating scheduled times_____.

13. Are separate toilet facilities available for your EC component? Yes No

14. Is running water available in each EC classroom? Yes No

15. Are supervisory persons available to EC teachers and/or aides?

Constantly On Call Regular Intervals Irregular Intervals Never

16A. Art teacher is available: Regularly Irregularly Never

16B. Music teacher is available: Regularly Irregulary Never

16C. Ratio (Number of EC teachers and aides/children):_____/_____

Program Indicators, Personnel Qualifications, and Schedule

17A. Number of certified EC teachers:_____

17B. Number of temporary or emergency certified teachers:_____

17C. Number of aides with less than high school:_____

D. high school graduates:_____E. some college_____

F. college graduates:_____

17G. Does length of school day vary? Yes No

Specify length(s) of school day and number of children involved and days:

	length	number	days per week
17H.	_____	_____	_____
17I.	_____	_____	_____

Program Indicators, Outdoor Equipment

Indicate all applicable outdoor equipment regularly available by making a check after A and check by B for improvements:

		Available	Improvement due to this grant
18.	Climbing apparatus	A_____	B_____
19.	Garden area	A_____	B_____
20.	Outdoor playhouse	A_____	B_____
21.	Sand box or area	A_____	B_____
22.	Slide	A_____	B_____
23.	Swings	A_____	B_____
24.	Teeter totter	A_____	B_____
25.	Wheel toys	A_____	B_____
26.	Total of different "A" types circled in 18-26:	A_____	Total "B" Improvements 18-26: B_____

27. Other equipment:_____

_____

Program Indicators, Indoor Equipment

Indicate all applicable indoor play equipment and supplies regularly available with a check beside A and check by B for improvements:

		Available	Improvement due to this grant
28.	Adult dress up clothes	A_____	B_____
29.	Baby carriage	A_____	B_____
30.	Clay or plasticene	A_____	B_____
31.	Collection of picture books	A_____	B_____
32.	Construction paper	A_____	B_____
33.	Dishes	A_____	B_____
34.	Dolls	A_____	B_____

35.	Household furniture	A_____	B_____
36.	Iron and ironing board	A_____	B_____
37.	Kitchen appliances	A_____	B_____
38.	Large hollow blocks	A_____	B_____
39.	Nature study (e.g., pet cages, aquarium)	A_____	B_____
40.	Paints	A_____	B_____
41.	Paste and scissors	A_____	B_____
42.	Puppets	A_____	B_____
43.	Puzzles (include packaged perceptual learning games)	A_____	B_____
44.	Record player and records	A_____	B_____
45.	Rhythm instruments (or other musical)	A_____	B_____
46.	Simple games	A_____	B_____
47.	Small blocks	A_____	B_____
48.	String or pull toys	A_____	B_____
49.	Table toys	A_____	B_____
50.	Tumbling mats	A_____	B_____
51.	Vacuum or sweeper	A_____	B_____
52.	Weaving materials	A_____	B_____
53.	Woodworking	A_____	B_____
54.	Total of different "A" types circled in 28-54:	A_____	Total "B" Improvements 28-54: B_____

55. Other equipment:_____ _____

_____

Program Indicators, Grouping

56. What is your basis of grouping

Age Locality Test Scores Other(Specify)_____ No grouping used

57. What ages of children are placed in a single group?

3 3½ 4 4½ 5 5½ 6

58. Have you special or remedial groupings? Yes / No

59. If Yes for 58, describe basis:_____

_____

60. In what size group do children usually receive instruction?_____

(Note: Arrange 61-64 to equal 100% total. All refer to "Indoor Learning".)

61. What percentage of indoor time is spent in large group (6 or more) instruction?_____

62. Small group (1-5) instruction?_____

63. Small peer group or individual activity: teacher directed?_____

64. Small peer group or individual activity: self selected?_____

Program Indicators, Evaluation and Reporting

65. Do parents of each child supply basic developmental information to the school? Yes / No

66. Length of interview or questionnaire in 65:_____(Number of different items of information)

67. Are basic health records kept for each child? Yes / No

68. Are individual cumulative records kept for each child? Yes / No

69. At what intervals are reports made to parents?_____

70. How is reporting accomplished?

Written Checklist Conference Other(Specify)_____

71. At what average intervals per child are informational notations made by the teacher or aide?

Weekly Monthly Quarterly Other(Specify)_____

72. Are diffusion effects evaluated? Yes / No

73. If Yes for 72, describe procedure:_____

_____

74. Is systematic observation of children used? Yes / No

75. If Yes for 74, of what characteristic(s) (Code by Guide I)?_____

_____

76. Are formal evaluation devices used, other than those contractually (See #147-152) specified as part of your Title I or III evaluation? Yes / No

77. If Yes for 76, of what characteristic(s) (Code by Guide I)?_____

_____

Program Indicators, Orientation

Indicate for 78-94 the percentage contribution of each program orientation that guides your thinking and planning. These should total 100%.

_____78. British infant school type

_____79. Creativity, originality, divergent thinking

_____80. Diagnostically based

_____81. Head Start or other group compensatory

_____82. Imitative behavior, modeling

_____83. Learning to learn, cognitive strategies

_____84. Maternal teaching; family effectiveness

_____85. Montessori

_____86. Operant or other reinforcement based

_____87. Peers as teachers or tutors

_____88. Piagetian based

_____89. Reading or number based readiness

_____90. Responsive environment

_____91. Socialization, psychoanalytic or drive management

_____92. Specific deficits (structured), Frostig, Bereiter-Englemann, Academic

_____93. Specific deficits (unstructured), DARCEE, Ameliorative

_____94. Traditional or nursery school

95. Describe in your own terms the major features of your own program's orientation (up to 25 words):_____

_____

_____

Program Indicators, Activities

Show the approximate percentage of classroom time consumed in your program by each of the following learning activities. Your estimates should total 100% for 96-138. It will be easier if you begin by checking off and then fill in percentages.

_____96. Attentional and motor control games (Simon says)

_____97. Audio recording of children

_____98. Caring for plants or animals

_____99. Classification, matching, discrimination

_____100. Clean up

_____101. Construction with paper, cardboard, expendables

_____102. Copying, lettering

_____103. Creative dramatics

_____104. Culture enrichment

_____105. Directed gross motor activity

_____106. Discussion, planning, questioning, sharing

_____107. Dramatic play

_____108. Drawing

_____109. Fantasy supported individual activity

_____110. Folk games

_____111. Large motor construction

_____112. Listening to stories

_____113. Mother-child interaction

_____114. Musical games

_____115. Outdoor free play

_____116. Outdoor group play activity

_____117. Painting

_____118. Programmed instruction

_____119. Repeating or verbal copying

_____120. Resource persons to classroom

_____121. Rhythm activity

_____122. Sand play

_____123. Science experiments

_____124. Sequential lessons (packaged)

_____125. Seriation, counting, equating groups

_____126. Settling down after activity change

_____127. Supervised rest

_____128. Time or process related concepts

_____129. Trips

_____130. Typing

_____131. Video viewing

_____132. Vocabulary development

_____133. Water play

_____134. Wood working

_____135. Work sheets

_____136. Other_____

_____137. Other_____

_____138. Other_____

Program Indicators, Implementation

Check each of the following which was used this year systematically or on a planned basis to assure specific implementation of your program orientation (refer to 95):

_____139. Demonstration by helping teachers

_____140. In-service training, other

_____141. Observation with feedback

_____142. Simulation, microteaching

143. What in-depth indicator(s) have you used to verify whether program implementation is proceeding according to your plan? (See A-3 and A-4 in "Matches" on this) Explain:_____

_____

Child Population Served

144. Age (Numbers):

A. 3_____, B. 3½_____, C. 4_____. D. 4½_____, E. 5_____,

F. 5½_____, G. 6_____

145. Sex (Numbers):

A. Boys_____ B. Girls_____

146. Ethnicity (Numbers):

A. Negro_____, B. Anglo_____, C. Spanish Surname_____,

D. Indian_____, E. Oriental_____, F. Other_____, G. Other_____

Behavioral Characteristics Studied (2 different per behavior domain coded after Guide I)

Records are to be kept for 147-152 for each distinguishable, involved demographic subgroup of children, which is identified in the U.S.O.E. guidelines regarding demographic records, at the time intervals which have been specified in your proposal. These are to be reported following each assessment as a part of your regular progress reporting.

147. P-_____ (From P-0, P-4, P-6, P-7)

148. P-_____ (From P-0, P-4, P-6, P-7)

149. C-_____ (From C-1, C-2, C-5, C-8)

150. C-_____ (From C-1, C-2, C-5, C-8)

151. A-_____ (From A-7 ff. gp., A-10, A-27 ff. gp., A-33 ff. gp., A-36)

152. A-_____ (From A-7 ff. gp., A-10, A-27 ff. gp., A-33 ff. gp., A-36)

Children Receiving Services by School Designation

Numbers	All Non-Public
_____153.	Cooperative nursery school
_____154.	Cooperative kindergarten
_____155.	Private nursery school
_____156.	Private kindergarten
_____157.	Day care
_____158.	Parochial nursery school
_____159.	Parochial kindergarten

Numbers	Public
_____160.	Nursery school
_____161.	Kindergarten
_____162.	Community

Family-Community Factors

Child socioeconomic level (use Guide II).

	Number
163. High	_____
164. Medium	_____
165. Upper lower	_____
166. Lower lower	_____

167. Number of children from homes in which a language other than English is spoken:_____

168. Number of children who share a bed:_____

169. Average number of siblings at home:_____

170. Average number of persons in home other than parents and siblings:

_____

171. Average number from 170 who are not related to the child:_____

Number in each type residential area:

	Number
172. Single family	_____
173. Duplex	_____
174. Apartment	_____
175. Subsidized project	_____
176. Heavily congested	_____

Residential location:

	Number
177. Rural or small town	_____
178. Suburban	_____
179. Inner city	_____
180. Migrant	_____

181. Mean duration of residence (years and months):_____

Number by family unity:

	Number
182. Intact (both own parents)	_____
183. Reconstituted (one parent and one stepparent or adopted)	_____

184. Broken (one parent only) _____

185. Placement (foster) _____

Level of parental education, (count parent living with child or supporting child):

	Father, Number	Mother, Number
186. Less than high school	A_____	B_____
187. High school	A_____	B_____
188. Some college	A_____	B_____
189. College graduate	A_____	B_____

Occupational condition of parent. (For occupational level see 163-166):

	Father, Number	Mother, Number
190. Disabled	A_____	B_____
191. Unemployed	A_____	B_____
192. Deceased	A_____	B_____
193. Employed	A_____	B_____
194. Homemaker	A_____	B_____

Recreation area available to children outside the home:

	Number
195. Scheduled play area or yard	_____
196. Project or public play area	_____
197. Vacant lot	_____
198. Streets	_____

199. List objects majority of children typically have to play with at home: _____

_____

_____

200. How many children are exposed at home to serious physical or sanitation hazards?_____

201. How many children are exposed at home to models of violence?_____

202. How many children are exposed in the home and neighborhood to intimidation, threats of or overt violence?_____

203. How many children have regular meal times at home?_____

204. How many children have regular sleeping times at home?_____

205. How many children are frequently left with multiple care-takers?_____

---

206. Is there an effective Community Action Program or other similar agency in the child's neighborhood? Yes / No

207. Do school and community have several areas of cooperation? Yes / No

208. Specify areas for 207:_____

---

209. What in-depth analysis are you performing on a family or community factor? (See Guide I A-48 and A-49) Explain:_____

Other Services Provided Through Program (All that apply)

210.	Dental examination	Yes	No
211.	Dental treatment	Yes	No
212.	Dental hygiene instruction	Yes	No
213.	Medical examination	Yes	No
214.	Medical: physician on call	Yes	No
215.	Medical treatment	Yes	No
216.	Medical prosthesis: hearing, vision	Yes	No
217.	Nurse available	Yes	No

218.	Parental: instruction, child development	Yes	No
219.	Parental: home, vistor or volunteer	Yes	No
220.	Psychological evaluation	Yes	No
221.	Social services: casework	Yes	No
222.	Speech evaluation	Yes	No
223.	Speech therapy	Yes	No
224.	Nutritional: breakfast	Yes	No
225.	Nutritional: lunch	Yes	No
226.	Nutritional: snacks	Yes	No
227.	Nutritional: milk	Yes	No
228.	Volunteers: community	Yes	No
229.	Volunteers: teens	Yes	No
230.	Volunteers: parents	Yes	No
231.	Parents involved as teacher aides	Yes	No
232.	Parents involved in basic program	Yes	No

233. If 232 is Yes, describe: _____

_____

_____

Coding Guide

Guide #1

This guide is listed in its fully expanded form in this report as the coded outline for "Matches", Part C, pp. 5-13.

Guide #2
Socioeconomic Level

Code

4 Upper--Children of administrators, executives, higher level professionals, entertainers, military commanders, higher level politicians, independently wealthy. Many samples designated "high" are really middle class. Income will not be used, since the index varies from time to time.

3 Middle--Small business owners, foremen, white collar workers, larger farm operators, middle and lower level professionals, some service workers (more subtle factors separate these into UL and Middle), technicians, engineers. These persons are usually salaried.

2 UL--Upper lower class--Blue collar workers (may have as high or higher income than white collar but are "working class" oriented), small farmers, tradesmen, semi-skilled, many service workers (e.g., laundry, food service), truckers. These persons usually work for wages. Some of the "technically" disadvantaged fit here.

1 LL--Lower lower class--Unskilled or minimally skilled workers, the unemployed, many of the disabled, the tenant farmers, migrants, welfare families. Lower lower is perhaps best understood as involving a style of life created by the uncertainties and tensions of poverty and the traits of instability, restlessness, external locus of control, apathy, and a sense of powerlessness.

PART E--

SAMPLING RECOMMENDATIONS OR GUIDELINES

SAMPLING RECOMMENDATIONS OR GUIDELINES

Most of the decisions affecting this part of the final report of the project, Literature Search and Development of an Evaluation System in Early Childhood Education, have already been anticipated. Particularly in the "Recommendations" portion of Part C and in Part D on the survey instrument, the general directions of these guidelines have already been sketched in. Because the rationale for them is already contained within the covers of this report, it will be sufficient here to reiterate them in systematic fashion. This will be done in terms of the sequence of phases implied in the prior recommendations. To accomplish U.S.O.E.'s stated purposes in such a longitudinal study, attention must be given to two areas of sampling: variables and cases. Since variables sampling was already systematically detailed in Part D, further mention of this problem will be avoided here. Unfortunately, as in the case of Part D, our present belief is that U.S.O.E. no longer has plans to use these guidelines directly for sampling. We are, nevertheless, providing them.

The concerns of this part are with a systematic presentation of guidelines for the sampling of cases. These guidelines are arranged to be congruent with all of our earlier recommendations of the needs for both measurement development and evaluation work. The guidelines are shown schematically in Figure I below in terms of the sampling requirements that are particular to the various phases of U.S.O.E.'s future measurement development and evaluation efforts. It will be evident that Phase I refers to a major thrust in normative demographic sampling and Phase II to the ongoing national needs for program evaluation. In Phase II differentiated pathways are indicated for one longitudinal panel and another for the

remainder of Title I and Title III evaluation. Further subdivisions are indicated where required with reference to measures of parent or of classroom variables.

Figure I
Sampling of Cases by Phases of the
National Normative and Evaluation Studies

Phase I

Tasks:
(A) Complete national demographic subgroup norming and validation of behavioral tests for five-year-olds (repeat norming periodically).
(B) Further development of parent measures.
(C) Further development of classroom delivery measures.
(D) Improvement of criterion-referenced test development procedures.

Sampling:
(A) Systematic and extensive as outlined in Report III, Part C.
(B) Constitute a small longitudinal panel from group in A.

Analyses:
(A) Demographic group validity; normative developmental curves for groups.
(B) Preliminary cluster analyses of program characteristics (SPEC).
(C) Inter-domain correlational analyses.
(D) Validity analyses for parent measures.
(E) Validity of classroom delivery measures.

Phase II

Tasks:
(A) Continued monitoring of developmental panel for long-term effects.
(B) More refined treatment of criterion-referenced test development.
(C) Periodic and annual progress evaluation for specific programs for delivery systems and products.
(D) Monitor development of new criterion-referenced tests for different child subgroups.

Sampling:
(A) Small panel longitudinal follow-up study by demographic categories (See Part D, Report III).
(B) Within-program summative evaluation for all programs, but with reduced data collection needs and minus control groups.
(C) Pretest new criterion-referenced tests within programs under positive reactive conditions; posttest with pretest as covariate.

(D) Administer new or revised developmental, family, and program delivery measures selectively and hold over for periodic renorming activity.

Analyses: (A) Longitudinal panel for all interrelationships.
(B) Within-program summative for gains
(C) Validity analyses of new criterion-referenced measures.
(D) Validity of new developmental, family, and program delivery measures.